North American Drought Monitor – July 2006

CANADA: Hot, dry weather throughout July caused deterioration in crop, forage and pasture conditions in many parts of the western Canadian provinces, reducing the possibility of a bumper crop which had earlier been anticipated. The remainder of Canada's agricultural areas has received adequate and timely precipitation. Severely low stream flows were reported throughout much of British Columbia, North Western Ontario, and some regions of southern Ontario.

British Columbia continues to be dry throughout much of the province. In some cases stream flows throughout British Columbia were reported at extremely low or near record low. Stream flows are currently low in the Peace, upper and middle Fraser, eastern Nechako and Thompson River basins. Agricultural production in British Columbia depends heavily on irrigation water from streams and rivers. Hot, dry weather has also reduced access to grazing ranges and hay production, especially in the central interior.

Hot and dry weather continued to dominate weather patterns throughout Alberta in July, leading to crop moisture stress and rapid depletion of soil moisture reserves over most areas. Provincially, surface moisture is rated as 36 per cent poor, 31 per cent fair, 28 per cent good, and five per cent excellent, while sub-surface moisture is 24 per cent poor, 35 per cent fair, 33 per cent good, and eight per cent excellent. Rain is needed across the province. The northwest region of Alberta, which has been experiencing dry conditions for most of the year, received significant precipitation throughout the month to reduce the degree of drought in much of this region. Southern areas of the Peace region received some rain fall but not significant enough to eliminate the drought conditions. Southern portions of the province were also significantly affected by the hot dry weather through the month, especially in the South eastern corner of the province.

Crop growth and development throughout Saskatchewan had been good but hot, dry weather in July resulted in damage to spring seeded crops. The hardest hit areas are located in the south and south west portions of the province. Yield predictions were reduced due to heat and drought stress that occurred in July, however over all yields are still expected to be near average. Pasture conditions deteriorated in July and only 33 percent were rated good to excellent.

Much of southern Manitoba is experiencing moderate or extreme drought conditions with the most severe being in the south east. Hot dry weather throughout July has increased the drought affected regions resulting in most of the southern portion of the province to be abnormally dry or in drought condition. The hot, dry weather continues to prematurely ripen crops. Harvest had begun before the end of July in some areas making it one of the earliest grain harvests on record; however, late seeded crops, pastures and haylands are deteriorating due to hot, dry weather. Some supplemental feeding of cattle is necessary on pastures and the potential for a future hay shortage exists, particularly in the Interlake region.

There has generally been adequate rainfall for good crop development in Ontario, Quebec and Atlantic Canada with little or no concern for drought east of Ontario. In Ontario, stream flows in the northwest and some areas of southern Ontario are at low to very low conditions. Northwestern Ontario has been impacted by abnormally dry conditions throughout much of the growing season and stream flows and some agricultural lands are being negatively affected by drought conditions.

UNITED STATES: By the end of July, the area of drought covered the Plains from the Rockies eastward to the Midwest and the South from Arizona to the Atlantic Ocean. In the drought areas, soil moisture was low, streamflow was especially low in the northern and central Plains and the Southeast, and vegetative health was poor. Coupled with very dry conditions were high temperatures and evaporation in the drought stricken areas. Drought and high temperatures impacted many sectors of the economy. Crops were highly stressed or dying, livestock was dying or prematurely sold because of a lack of feed and water, water restrictions were common in many areas, and wildlife in search of food and water was reported in urban areas. Disaster conditions were declared by the governors of several states. Dry conditions also led to dozens of fires in the western half of the country. Based on the Palmer Drought Index, coverage of moderate to extreme drought increased from 45 percent of the contiguous U.S. at the end of May to 51 percent by the end of the month.

The dry weather in July was a continuation of very dry conditions for the last several months across much of the central part of the country. South Dakota recorded the second driest May through July period in a 112-year history. North Dakota, Minnesota and Iowa recorded the fifth driest, Nebraska the tenth driest, and Oklahoma and Mississippi the eleventh driest in the 3-month period.

The extent and timing of the mid-U.S. dryness has caused steadily increasing stress on crops for the nation as a whole. By the end of the month (according to the July 30 USDA NASS report), 31% of the spring wheat, 34% of the cotton, 36% of the sorghum, 42% of the oats crops, and 48% of the pasture and range land, nationwide, were in poor to very poor condition. The statewide ratings for poor to very poor condition included: Texas (oats, 63%; corn, 48%; cotton, 52%; sorghum, 53%), South Dakota (oats, 58%; spring wheat, 60%; sorghum, 60%; soybeans, 40%, corn, 50%), North Dakota (oats, 60%), Alabama (cotton, 75%), New Mexico (sorghum, 66%), and Oklahoma (cotton, 53%). Poor to very poor percentages for pasture and range land, by state, include: Alabama (82%); Arizona (81%); Oklahoma (72%); North Dakota, Wyoming and Texas (71%); Nebraska and South Dakota (70%); Colorado (67%); Missouri (66%); and Georgia and Minnesota (65%).

Compared to June, the area of drought expanded in the Southeast to the Atlantic Ocean and in the northern Plains westward in Wyoming and across Montana. Drought intensity increased throughout the central part of the country, but decreased in Arizona and New Mexico.

MEXICO: In July, nationally, Mexico received slightly above normal precipitation. The National Meteorological Service ranked the month as the 23rd wettest July since 1941. In general July rainfalls contributed to some improvements of the long term drought conditions in northwest Mexico, and some improvements were also observed in portions of central Mexico. However, dryness worsened across portions of northeast Mexico (mainly Coahuila) and in small area south of Mexico City and in the eastern half of Oaxaca. Regionally, the largest rainfall deficits during the period from the first of May to the 31st of July were reported in Golfo Norte (Tamaulipas) and Pacifico Sur National Water Commission (CNA) administrative regions. The CNA reported that dam levels in northwest Mexico are recovering after the dry conditions during the last winter season, while some dams in Coahuila and Tamaulipas at this time of the year are near to their historical low levels. In July four tropical cyclones developed in the eastern north Pacific; however, only tropical storm Emilia produced good rains in western Mexico and the southern part of the Baja California peninsula, favoring some improvements over these regions. Drought agricultural impacts are reported in the states of northeast Mexico (Coahuila, parts of Nuevo León, Tamaulipas, and San Luis Potosí), as well as Morelos, and Oaxaca in central and southern Mexico, respectively.

The most important changes in the drought distribution over Mexico include the reduction of D4 and D3 categories over Sonora, Chihuahua and Sinaloa, where at the end of July only two areas of extreme drought conditions (D3) remained, one along the border between Sonora and Arizona and the other extending from southern Sonora to northern Sinaloa. In northeast Mexico dryness moved from northern Tamaulipas westward into Coahuila where a D4 area was introduced. Only minor changes were observed in central and southern Mexico; over the first region the D1 (moderate drought) and D2 (severe drought) eroded, although a fringe of D1 was introduce south of the Federal District (mainly Morelos state). A persistent rainfall deficit since the beginning of the present rainy season is reported over eastern Oaxaca; as a consequence, the D1 category was introduced over this region, while abnormally dry conditions were indicated in the state of Yucatan.